

### **ABSTRACT OF THE DISCLOSURE**

A data processing system 2 having a nested interrupt controller 24 supports  
5 nested active interrupts. The priority levels associated with different interrupts are  
alterable (possibly programmable) whilst the system is running. In order to prevent  
problems associated with priority inversions within nested interrupts, the nested  
interrupt controller when considering whether a pending interrupt should pre-empt  
existing active interrupts, compares the priority of the pending interrupt with the  
10 highest priority of any of the currently active interrupts that are nested together.

[Figure 4]